U. S. DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

FIELD NOTES

FORAGE CROP INVESTIGATIONS

FIELD NOTES.

INSTRUCTIONS.

In case of a series of row or plat tests it is desirable to have all the constant conditions recorded for future reference. This can be done on the blank pages in the front of the book for all points not covered by the topic headings. In case several sets of experiments are recorded in a single book the conditions governing each may be given by filling in the outlines provided. (See pp. 7–11.) The blank pages may be used for any additional data which seem desirable, such as the high, low, and mean temperatures, rainfall, and date of the last killing frost in the spring and of the first killing frost in the fall. At the back of the book are blank pages for convenience in making field calculations and temporary notations. Row numbers should be listed in the order that they occur in the field. Records should be made in rate per cent wherever possible and in such manner that the better the variety or strain the higher the percentage recorded. Rules given under "Explanation of headings and abbreviations used in taking field notes in forage-crop investigations" should be followed, in order that the notes on any given crop may be uniform for all the stations.

8—3728

EXPLANATION OF HEADINGS AND ABBREVIATIONS USED IN TAKING FIELD NOTES IN FORAGE-CROP INVESTIGATIONS.

SIZE OF PLAT.—Stated in fractions of an acre, as $\frac{1}{5}$, $\frac{1}{10}$, etc., or, if nursery rows, length of the row in feet.

RATE OF SEEDING.—Pounds per acre.

STAND.—Given in percentages or number of plants in the row.

DATE.—Given in figures, as 9–15 (September 15).

UNIFORMITY.—Given in percentages.

VIGOR.—Strength or abundance of growth: *p*=poor; *f*=fair; *g*=good; *ex*=excellent.

CONDITION.—If the crop is biennial or perennial, give percentages showing what portion has survived the winter.

FOLIAGE COLOR.—Indicate the shade of green as follows: *g*=green; *l g*=light green; *d g*=dark green; *y g*=yellowish green; *g g*=grayish green; *p g*=purplish green. The superlative degree of any of these colors may be indicated by placing *v* before the color abbreviations, as follows: *v l g*= very light green.

HABIT OF GROWTH.—Described by the following terms: *e*= erect; *s e*=suberect; *d*=decumbent (prostrate, tip ascending); *p*=procumbent (trailing); *v*=vining; *b*=bushy.

STEMS PER PLANT.—Average number of stems produced from one seed, as 7–8.

MEASUREMENTS.—Given in inches unless otherwise indicated.

DISEASE RESISTANCE.—Give the percentage of noninfection; best determined by estimating the percentage of infection and subtracting this from 100.

DROUGHT RESISTANCE.—Indicate the comparative vigor of plants under conditions of drought, as follows: *p*=poor; *f*=fair; *g*=good; *ex*=excellent.

LODGING.—Described as *none*, *little*, *medium*, *much*.

SHATTERING.—Described as *none*, *little*, *medium*, *much*.

QUALITY.—Indicated as follows: *p*=poor; *f*=fair; *g*=good; *ex*=excellent.

ABBREVIATIONS.

GENERAL.—*v*=very; *med*=medium; *p*=poor; *g*=good; *ex*=excellent (indicates an unusually high degree, seldom occurring); *l*=little; *m*=much; *0*=none or nothing; *lg*=long; *s*=short; *sm*=small; *lrg*=large; *ab*=abundant; *few*=few; *cs*=coarse; *sl*=slender.

COLOR.—*v*=violet; *i*=indigo; *b*=blue; *g*=green; *y*=yellow; *o*=orange; *r*=red; *pur*=purple; *pk*=pink; *l*=light (used before a color); *d*=dark (used before a color).

SHAPE.—*ov*=oval; *rd*=round; *obl*=oblong; *lin*=linear; *obo*=obovate; *cor*=cordate; *cyl*=cylindrical; *elip*=elliptical.

Test of, *19*

Object

Location

Kind of soil

Character of field

Previous crop

Preparation of seed bed

1.

2.

3.

4.

5.

6.

Seeding method

Test of, *19*

Object

Location

Kind of soil

Character of field

Previous crop

Preparation of seed bed

1.

2.

3.

4.

5.

6.

Seeding method

Test of _____, *19*_____

Object _____

Location _____

Kind of soil _____

Character of field _____

Previous crop _____

Preparation of seed bed _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Seeding method _____

Test of _____, *19*_____

Object _____

Location _____

Kind of soil _____

Character of field _____

Previous crop _____

Preparation of seed bed _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Seeding method _____

Test of _____, *19*_____

*Object*_____

*Location*_____

Kind of soil _____

*Character of field*_____

*Previous crop*_____

*Preparation of seed bed*_____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

*Seeding method*_____

Test of _____, *19*_____

*Object*_____

*Location*_____

Kind of soil _____

*Character of field*_____

*Previous crop*_____

*Preparation of seed bed*_____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

*Seeding method*_____

Test of _____, *19*_____

Object _____

Location _____

Kind of soil _____

Character of field _____

Previous crop _____

Preparation of seed bed _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Seeding method _____

Test of _____, *19*_____

Object _____

Location _____

Kind of soil _____

Character of field _____

Previous crop _____

Preparation of seed bed _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Seeding method _____

Test of _____, *19*_____

Object _____

Location _____

Kind of soil _____

Character of field _____

Previous crop _____

Preparation of seed bed _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Seeding method _____

Test of _____, *19*_____

Object _____

Location _____

Kind of soil _____

Character of field _____

Previous crop _____

Preparation of seed bed _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Seeding method _____

M

Variety	No.	Date introduced	Source
Mammoth			Same as Mammoth Yellow
Mammoth Yellow	17280	1882	Not known
Mammoth Brown	02947		Not known
Manchu	30593	1911	Ninguta, Manchuria
Mandarin	36653	1913	Pek tuan lin tza, North Manchuria (Heilung Chiang)
Manhattan	17277		Tokio, Japan.
McQueen's Extra High Yielder	03232		
Medium Black			Same as Buckshot
Medium Brown			
Medium Early Black			Same as Buckshot
Medium Green			Same as Guelph
Medium Early Yellow			
Medium Yellow	17269	1901	Central China
Merko	20412	1906	Merkoschofka, Siberia.
Meyer	17852	1906	Peking, China.
Mikado		1905	Selected from Medium Yellow by A. A. Parsons, Plainfield, Ind.
Mongol		1901	Central China.
Morgan	22633	1908	Shekiung, China
Morse	19186	1906	Nerchwang, Manchuria.
Mitsoy	03208		Selection by the Minn. Exp. Sta.

Plant					Flowers		Pubescence	
Height in	Habit	Branches	Leaves persist	Mature	Color	Season	Color	Amt.
	E	Ma	no	145	W	85-90	G	
	E	Ma	no	135	P	65-70	T	
24-30	E	Ma	no	115	W.P	35-40	T	Me
18-24	E	Ma	no	100	P	35-40	G	Me
16-22	E	Me	no	105	W	40-45	G	Me
				113	P		T	
				115	P		T	
36-42	E	Ma	yes	120	P:W	40-45	T,G	Me
30-36	E.T	Ma	no	130	P	50-55	T	Me
	E	Ma.	no.	120	P	45-50	T	Me
	E	Ma	no	115	P	45-50	T	Me
36-42	E.T	Ma	no	150	P	85-90	T	Me
30-36	E	Ma	no	125	P.W	50-55	G	Me
	E	Ma		100	P	35-45	T	

Seed

Color	Long mm.	wide mm.	thick mm.	Color hilum	Color germ	Iodine value of oil
S. Y.						
straw yellow	7-8	6-7	5-6	Ta	Y.	
russet	8-9	7-8	5-6	Ru	Y	
straw yellow	8-9	6-7	6-7	bl.	Y	
straw yellow	7-8	6-7	5-6	pale	Y	
straw yellow	8-8½				Y.	
straw yellow					Y	
Black					Y.	
Straw yellow						
Straw yellow	7-7½				Y.	
olive brown	8-9	5-6	4-5	O. Br.	Y	
	8½-9				Y	
straw yellow	7-8	6-7	6-7	C. Br.	Y	
straw yellow	6-7	5-6	4-5	Ta. to C. Br.	Y	
olive yellow	5½-6				Y	
olive yellow	7-8	7-8	5-6	ta	Y	
straw yellow	6-7	5-6	4-5	C. br.	Y.	

Seed

Per cent oil	Per cent protein	No. to bu	Wt. of bu.	
			16s.	
18.6	37.6	128,700		
16.5		111,300		
18.9	38.7	141,000		
19.8 18.8	37.7	174,700		
19.3	34.1			
16.4		294,600		
18.6	35.4	136,320		
18.2		185,200		
15.4		243,000		
19.6		149,700		
16.2		221,700		

Pods

Color	Long mm.	wide mm.	thick mm.	No. of seed	Shatter	Shape
	1½-1¾			2-3	Mo	T
straw	35-45	9-10	7-8	2-3	L	T
tawny	40-50	9-11	6-7	2-3	L	
tawny	45-55	10-11	7-8	2-3-4	L	T
gray	40-50	9-10	7-8	2-3	L	T
	1¾-2			2-3	L	T
	1¼-1½			2-3	L	T
	1½-1¾			2-3	Mo.	T
	1½-1¾			2-3	L	G
	2-2¼			2-3-4	L	T
tawny	35-45	8-9	8-9	2-3	L	T
tawny	35-45	8-9	5-6	2-3	L	T
	1¼-1½			2-3	L	C
	1¾-2¼			2-3	Mo	T
tawny	35-45	7-9	6-7	2-3	L	T

Variety	No.	Date introduced	Source
Medium Ita Name	8423		Same as Tokio
Mammoth Black	03675		Same as Shanghai
Manchuria 28050 - S.D.	02756, 03577 03755		
Minn. Ped. #2	03801		
Medium Early Green	01709		Same as Guelph
Manchurian	03609		
Manchuria Brown			
Medium	01327		
Michigan Green			
Minn. #166	03591		
Minn. #167	03580		
Minnsoja	03585		
Mukden			
Mamredo			
Mansoy			

Plant					Flowers		Pubescence	
Height in.	Habit	Branches	Leaves persist	Mature Das.	Color	Season	Color	Amt.

Seed

Color	Long mm.	Wide mm.	thick mm.	Color hilum	Color germ	Iodine value of oil
Black						

Seed

Per cent protein	Per cent oil	No. to bu.	Wt. of bu.			

Pods.

Color.	Long mm.	wide mm.	thick mm.	No. of seed	Shatter	Shape
Black						

N

Varietal Name	No.	Date Introduced	Source
Natsu	19984	1907	Yokohama, Japan.
Nemo	19985	1907	Yokohama, Japan.
Nielsen	22644B	1908	Plant selection from 22644. at Arlington Farm, (Hangchow, China
Nigra	22407	1908	Hongkong, China.
Nuttall	17253 (6416)	1901	Pingyang, Korea
Nanking	71597		

Plant					Flowers		Pubescence	
Height in	Habit	Branches	Leaves persist	Mature Das.	Color	Season	Color	Amt.
30-36	E	Ma	No	140	P.W.	60-65	T.G	Me
24-30	E	Ma	No	130	W.P	50-55	T	Me
36-42	E	Ma	No	154	P	80-85	G	Me
24-30	E	Me	No	115	W.P	45-50	T.G	Me
18-24	E	Me	No	115	W	45-50	T	Ma

Seed

Color	long mm.	wide mm.	thick mm.	Color hilum	Color germ	Iodine value of oil ~~seeds~~
Straw. yellow					Y	
Olive yellow					Y	
Olive yellow					Y	
Black					Y	
Black					Y	

Seed

Per Cent oil	Per Cent protein		No. of seed to bu	Wt. of bu. lbs.	
21.2	33.8				
18.7	35.6		120,960		

Pods

Color	Long mm.	wide mm.	thick mm.	No. of seed	Shatter	Shape
				2-3	L	T
				2-3	L	T
				2-3	L	T
				2-3	L	S.C
				2-3	Mo	S.C

O

Variety	No.	Date introduced	Source
Ogemaw	17258	1902	Cross between Early Bl. and Ly. Br. by E. E. Evans. Mich.
Ohio No. 7491	02690		
Ohio No. 9016	02693		
Ohio No. 9035	03614, 03699 03736, 03831		
Ohio No. 9100	02695		
Ohio No. 9001	01759 02692		
Ohio No. 7469	02691		
Ohio No. 9110	02697		
Okute	19986	1907	Bochmer & Co. Yokohama, Japan.
Otootan	02417, 03233 03825	1911	~~Dep~~ C. K. McClelland, Ga. Exp. Sta. From Hawaii & Formosa
Oyachi	02705		
Ozark	37272		

					Flowers		Pubescence	
Height in.	Habit	Branches	Leaves persist	Mature Days	Color	Season	Color	Amt
	E	Ma	no	85	W	30-35	T	Me
18-24	E	Me	No	100	P.W	35-40	T	Me
	E	Ma	no	170	P	90-95	T	Me

Seed

Color	Long mm.	wide mm.	thick mm.	Color hilum	Color germ	Iodine value of oil
chocolate	8-9	6-7	5-6	Ch.	Y	
Black	6-7	5-6	4-5	Bl.	Y	

Seed

Per Cent oil	Per Cent protein	No. of seed to bu.	Wt. of bu. lbs.	
17.5	34.2	188,000		
21.4		74,880		
17.7		368,600		

Pods

Color	Long mm.	wide mm.	thick mm.	No. of seed	Shatter	Shape
brown	40-50	9-10	6-7	2-3		
				2-3	No	T
tawny	35-45	7-8	5-6	2-3		

25 T

O

25 T

25 T

P

Variety	No.	Date introduced	Source
Peking	17852B	1907	Selection from the Meyer.
Pingsu	18259	1906	Tschang-ping-tsu, China
Pedigreed Sable	03726		
Pinnu	28050	1910	Harbin, Manchuria.
Perley's Mongol	03592		
Pekwa			
Pinedell			

					Flowers		Pubescence	
Height in.	Habit	Branch	Leaves persist	Mature Days.	Color	Season days.	Color	Amt
30-36	E	Ma	no	120	P.W	50-55	T	Ma
30-36	E	Ma	no	125	P.W	50-55	G.T	Ma
18-24	E	Ma	no	105	P	35-40	G	Ma

Seed						
Color	Long mm.	wide mm.	thick mm.	Color hilum	Color germ	Iodine value oil
Black	7-8	5-6	3-4	bl.	Y	
Black					Y	?
Black					Y	
Straw yellow	7-8	6-7	6-7	Ta	Y	\
					Y	

Seed

Per cent oil	Per cent protein	No. of seed to bu	Wt. of bu lbs.	
16.0		383,300		
19.6	36.3			
18.4		160,300		

Pods

Color	Long mm.	wide mm.	thick mm.	No. of seed	Shatter	Shape
Tawny	40-50	8-9	4-5	2-3	L	C
				2-3	Mo.	M.C.
				2-3	L	T

37 V

Q

Variety	No.	Date introduced	Source
Quebec #92	02196		
Quebec # 537	02195 03584		

					Flowers		Pubescence	
Height in.	Habit	Branch	Leaves persist	Mature Das.	Color	Season Das.	Color	Amt.

Seed

Color	Long mm.	wide mm.	thick mm.	Color hilum	Color germ	Iodine value oil

Seed

Per cent oil	Per cent protein	No. of Seeds to bu.	Wt. of bu lbs.	

Pods

Color	Long mm.	wide mm.	thick mm.	No. of seed	Shatter	Shape

43 W

R

Variety	No.	Date introduced	Source
Riceland	20797		
Rokugatsu	6326 (17268)		Japan. Same as Ito San
Round Black	6334.		
Roosevelt	01992, 02112 03586, 03859		
Royal	03527		
Red Sable	03593		
Roosevelt Medium Early Yellow	02113		

Plant					Flowers		Pubescence	
Height in.	Habit	Branches	Leaves persist	Mature Das.	Color	Season Das.	Color	Amt.

Seed						
Color	Long mm.	wide mm.	thick mm.	Color hilum	Color germ	Iodine value of oil
Black (dull)						
Black						
Black						
Black						

Seed

Per cent oil	Per cent protein	No. of Seed to bu.	Wt. of bu lbs.	

Pods

Color	Long mm.	wide mm.	thick mm.	No. of seed	Shatter	Shape

R

Variety	No.	

S

Variety	No.	Date introduced	Source
Sable	01535, 01713 03712, 03829		Wing Seed Co., Mechanicsburg Ohio.
Samarow	17260	1901	J. M. Thorburn & Co. N.Y. City
Sedo	23229	1908	Tientsin, China
Shanghai	14952	1905	Shanghai. China.
Sherwood	17862	1906	Tientsin. China
Shingto	21079	1907	Tieling. Manchuria
Shinto			
Shiro-Tairyu	02701		
Southern			Same as Mammoth Yellow
Stuart	22644	1908	Hangchow, China
Swan	22379	1908	Canton, China.
Soysota	03209		
Sooty	16790		
Shiro-Shoryu	02701		
Saskatoon	02108		
Southern Medium Green	03597		
Stone's Ensilage	03598		
Shiro-Daidzu	02776		
Small Yellow	01338		
Southern Prolific	37250		Named by Ga. Exp. Sta. Athens

Plant					Flowers		Pubescence	
Height in.	Habit	Branches	Leaves persist	Mature Das.	Color	Season das.	Color	Amt.
18-24	E	Me	yes	110	P	40-45	G	
				115	P		T	
30-36	E	Ma	no	145	P; W	70-75	T	Me
30-36	E	Ma	no	120	P.W	50-55	G	Me
20-24	E	Ma	no	115	P; W	45-60	T	Me
					P		G	
36-42	E	Ma	No	150	P	85-90	G	Me
				120	P.W		G	
				97	P		T	
				97	W		G	

Seed

Color	Long mm.	wide mm.	Thick mm.	Color hilum	Color germ	Iodine value oil
Black					Y	
Green	7'-7½				Gr	
	9-10				Y	
Black	8-8½				Gr.Y	
Straw Yellow	7-7½				Y	
Olive Yellow	6½-7				Y	
Straw Yellow					Y	
	7					
	7-7½				Y	
	6½-7					
Black (dull)						

Seed

Per cent oil	Per cent protein	No. of seed to bu.	Wt. of seed lbs.	
20.8	34.7	227,520		
18.4	35.5	163,200		
18.8	37.3	187,200		
18.6	35.2	119,040		
18.2	36.4			
14.3				
17.7	39.6			

Pods

Color	Long mm.	wide mm.	thick mm.	No. of Seed	Shatter	Shape
	1½-1¾			2-3	L	T
	1¾-2¼				L	T
	2¼-2½			2-3	L	T
	1½-1¾			2-3	L	T
	1½-1¾				L	T
	1½-1¾			2-3	L	T
	1¾-2			2-3	L	G
	1½-1¾				Mo	T
	1½-1¾			2-3	L	T
	1½-1¾			2-3	L	T

S

Variety	No	Date introduced	Source

Plant					Flowers		Pubescence	
Height in.	Habit	Branches	Leaves persist	Mature das	Color	Season	Color	Attr.

T

Variety	No.	Date introduced	Source
Taka	21999	1907	Boshan, China.
Tarheel	03223		Same as Shanghai
Tarheel Black	02104, 03152 03717		Same as Shanghai.
Tasting	20854	1907	Harbin, Manchuria
Tokio	17264 (8424)	1901	Tokio, Japan
Tonomaga	03212		
Trenton	24610	1904	Selected from Mammoth by S. J. Leavell, Trenton, Ky.
Tsurumoko	03237		
Tarheel Brown			
Tanloxi			

					Flowers		Pubescence	
Height in.	Habit	Branches	Leaves persist	Mature Das.	Color	Season das.	Color	Amt.
			No	125	P.W		T.G	
	E	Ma	no	140	P;W	140	T	
				105	P.W		T	
	E	Ma	no	145	P.W	70-75	G	
				100	W		G	
				145	W		G	
				115	P		G	

Seed

Color	long mm.	wide mm.	thick mm.	Color hilum	Color germ	Iodine value of oil
	9-10				Y	
Black						
Black	9-10	7-8	6-7	bl.	G; Y.	
	7½-8				G	
olive yellow	7-8	6-7	5-6	pale	Y	
	6½-7				Y	
Black						

Seed

Per cent oil	Per cent protein	No. of seed to bu.	Wt. of bu. lbs.	
		132,480		
18.6		163,200		
		163,200		
18.4	35.0	134,400		

Pods

Color	Long	wide	thick	No. of seed	Shatter	Shape
	2-2 1/4				L	C
Brown	45-55	9-10	6-7	2-3	I	
	1 1/2-1 3/4				L	T
	1 1/2-2				L	T
	1 1/2-1 3/4			2-3	L	T
					L	T
	2-2 1/4			2-3	L	T

T

Variety	No.	

U

Variety	No.	

V.

Variety	No	Date Introduced	Source
Vireo	22874	1908	Tokio. Japan.
Virginia	19186D	1907	Pure field selection from Morse, Arl. Farm.
Virginia Yellow			Same as Mammoth Yellow
Virginia Brown	03743		Same as Virginia
Very Dwarf Brown	0821		Same as Algerian
Vermont Medium Green	03596		Same as Guelph

					Flowers		Pubescence	
Height in.	Habit	Branch	Leaves persist	Mature Das.	Color	Season Das.	Color	Amt.
				105	P.W		T	
	E.T	Ma	no	125	P	50-55	T	

Seed

Color	Long mm.	wide mm.	thick mm.	Color hilum	Color germ	Iodine value oil
	6-6½				Y	
olive	8-9	5-6	4-5	olive	Y	

Seed

Seed

Per Cent oil	Per Cent protein	No. of Seed to bu.	Wt. of bu. lbs.	
17.9	40.2	207,300		
17.9				

Pods

Color	Long mm	Wide mm.	thick mm.	No. of seed	Shatter	Sha
	1½-2				L	T
o Tawny	40-50	8-9	5-6	2-3	L	G

W

Variety	No	Date introduced	Source
White	6396 (17271)		Same as Haberlandt.
Wilson	19183	1906	Nenchwang, Manchuria
Wilson-Five	19183-5	1912	Pure selection from Wilson at Arl. Farms.
Wisconsin Black	0852, 03576 03698		
Wis. Early Black	02689, 03207 03761, 03838		Selection from Early Black developed by Wis. Exp. Sta.
Wing's No. 1	03750		
Wis. Pedigreed No. 2.	03664		
Wilson Early	03720		
Wing's Pedigreed Sable	03520		
Wing's Royal	02752		
Wis. Early Brown.	03661		
Wis. Early Green	03659		
Wea	30600	1911	Introduced from Shuangchengpu, Manchuria
Watson Black			
White Eyebrow	~~03582~~ 30745		
Wilson-Early Black	03886		
Wisconsin Pedigreed Black	02104		
Wilson Black	03737, 03818 03821.		
Wing's Wilson	03216		
Wrinkled Select	02475		

					Flowers		Pubescence	
Height in.	Habit	Branch	Leaves persist	Mature Das	Color	Season Das.	Color	Amt.
	E.	Ma	no.	120	P.W	50-55	G.T	
	E	Ma	no	120	W		G	
	E	Ma	Yes	100	P	30-35	T	
	E	Ma	no	110	P	35-40	G	

Seed

Color	long mm.	wide mm.	thick mm.	Color hilum	Color germ	Iodine value oil
Black	7-9	6-7	4-5	bl.	Y.G.	
Black	7-8	5-6	3-4	bl.	Y	
Black						
Black	8-9	5-6	4-5	bl.	Y	
Black						
Black						
Black						
straw yellow	7-8	6-7	5-6	dark olive	Y	
Black						
Black						
Black						
Black						
Black						

Seed

Per cent oil	Per cent protein	No. of seed to bu	Wt. of bu. lbs.	
18.4	37.8	144,000		
15.2		301,400		
17.7		185,200		
19.6	37.2	194,880		

Pods

Color	Long mm.	wide mm.	thick mm.	No. of seed	Shatter	Shape
brown	40-50	8-9	5	2-3	L	G
gray	~~50-55~~	8-9	4-5	2-3	L	C
brown	40-50	8-10	6-7	2-3	L	
gray	40-45	7-8	6-7	2-3	L	T

W

Variety	No.	

Y

Variety	No.	Date introduced	Source
Yachi	03211 03543		
Yamagata-cha-daizu	17257	1890	
Yellow			Same as Mammoth Yellow
Yellow Eda Mame	17268		Same as Sto Sam. R.I. Exp. Sta.
Yellow Etampes			
Yellow Reisen	22318	1908	
Yosho	17262	1901	
Yoshioka	17262 (6314)		Same as Yosho
Yoko	03231, 03882		
Yoko-Terra ✓	19981	1907	Introduced from Yokohama Japan

					Flowers		Pubescence	
Height in	Habit	Branch	Leaves persist	Mature Das.	Color	Season Das.	Color	Amt
				104	W.P		T	
				145	W		G	145
				110	P		T	
	E	Ma	no	120	P.W	50-55	G	

Seed

Color	Long mm.	wide mm.	thick mm.	Color hilum	Color germ	Iodine value oil
S.Y.					Y	
straw yellow	7-8	6-7	5-6	C. br.	Y	P.M

Seed

Per cent oil	Per cent protein	No. of seed to bu	Wt. of bu. lbs.	
16.3				
19.9	35.0			

Pods

Color	Long mm.	wide mm.	thick mm.	No. of Seed	Shatter	Shape
	1½-1¾			2-3	L	T
						K
	1½-2				L	T
gray	40-50	10-11	6-7	2-3	Mo	T

By using this frank no postage is required in returning this book to the Office of Forage-Crop Investigations.

U. S. DEPARTMENT OF AGRICULTURE,
Official Business.

Penalty for private use to avoid the payment of postage, $300.

U. S. DEPARTMENT OF AGRICULTURE,

WASHINGTON, D. C.

BUREAU OF PLANT INDUSTRY.
FORAGE-CROP INVESTIGATIONS.
8—3728